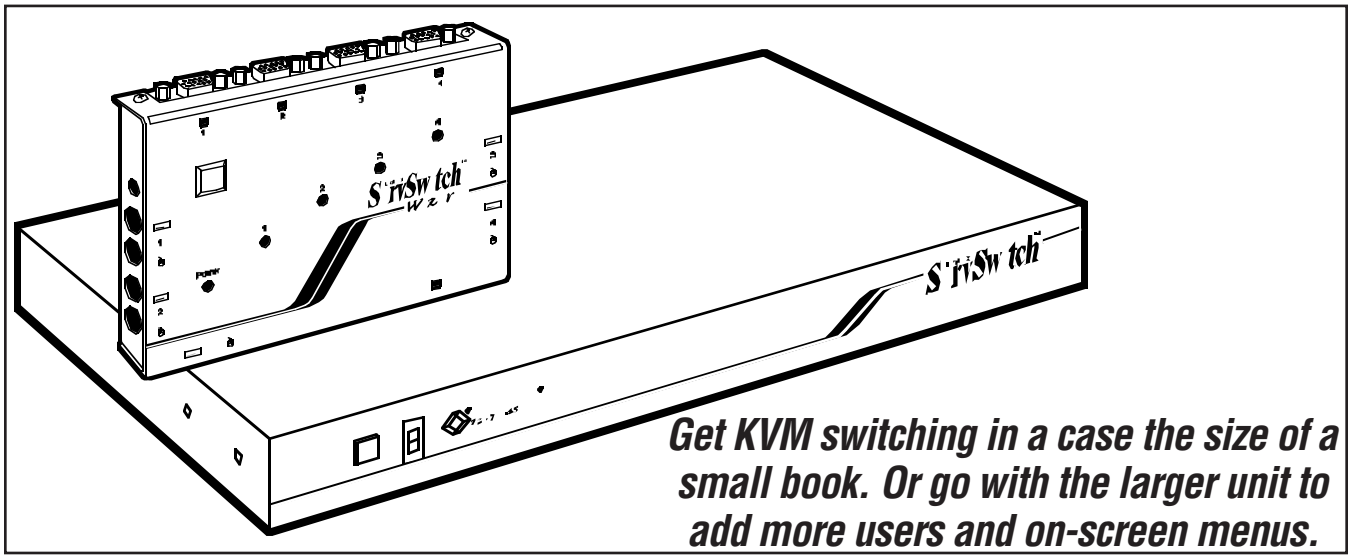
BLACK BOX®
NETWORK SERVICES

SERVSWITCH™ WIZARD AND WIZARD PRO



Key Features

- ***Both models:* Handle resolutions up to 1600 x 1200.**
- **Support ThinkPad and IntelliMouse.**
- **Multiple channel-switching methods.**
- **Powered from interface or optional power supply.**
- **Cascadable.**
- ***Wizard*: Small and light enough to be placed almost anywhere.**
- ***Wizard Pro*: On-screen menus for easy configuration and operation.**

Keyboard/video/mouse switches are supposed to save space by letting you manage two or more PCs with just one monitor, keyboard, and mouse, right?

Then why do so many of them take up so much dedicated space on your desktop?

Here are two quite different KVM switches. One you can put anywhere: The ServSwitch™ Wizard (SW641A for the 2-port model, SW642A for the 4-port model) is a little over 2.8 cm thick and measures 16.8W x 22.1D cm. It's so tiny we don't offer a rackmount kit for it—we ship it with Velcro® strips instead, so you can stick it on the wall!

The other, the ServSwitch™ Wizard Pro (SW644 for the 4-port model, SW648A for the 8-port model), *will* go in a 19" rack with its Rackmount Kit (RMK19WP). Even if you put it on the desktop, it's sturdy enough to go *under* a monitor or other piece of equipment.

Both models normally operate by drawing a minuscule amount of power from the keyboard interfaces of the attached PCs. (In fact, the ServSwitch Wizard draws so little energy that laptops can power it.) But we do offer an optional power supply (PS649) for applications that require cascading units to reach many computers or running cables for long distances.

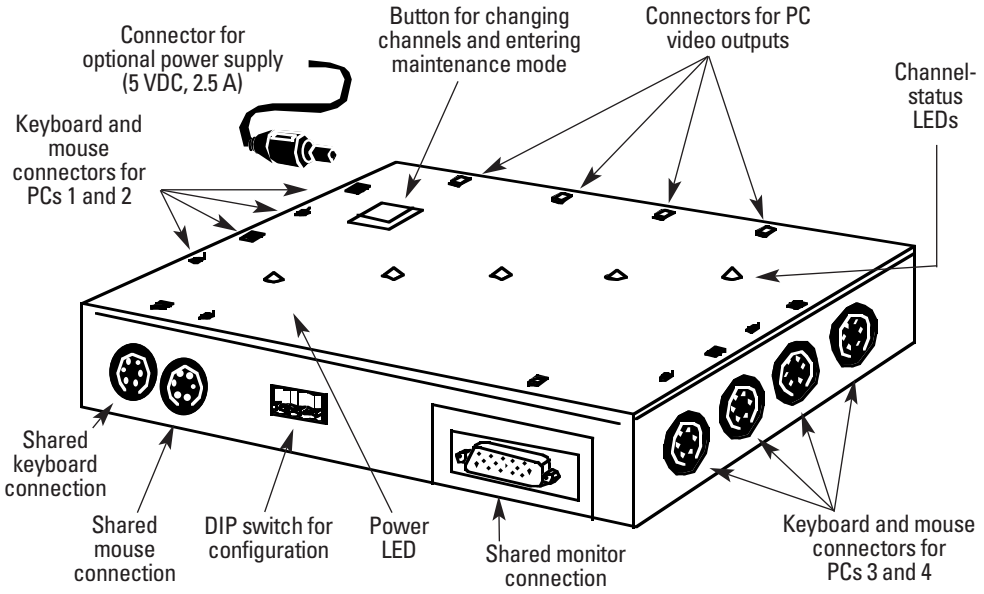
The Wizard and Wizard Pro support both PS/2® type (6-pin) and PC/AT® type (5-pin) keyboards and keyboard ports (although the PC/AT type require adapters). They handle keyboard modes 1, 2, and 3.

They also support two- or three-button PS/2 mice, including "wheel" mice like the Microsoft® IntelliMouse™, as well as computers with RS-232 mouse ports (these will require adapters too). They can handle both "burst" and "stream" mouse modes, so they can support the IBM® ThinkPad® and its "Y" cables. They even have mouse-restoration functions that let you hot-plug the mouse in some systems.

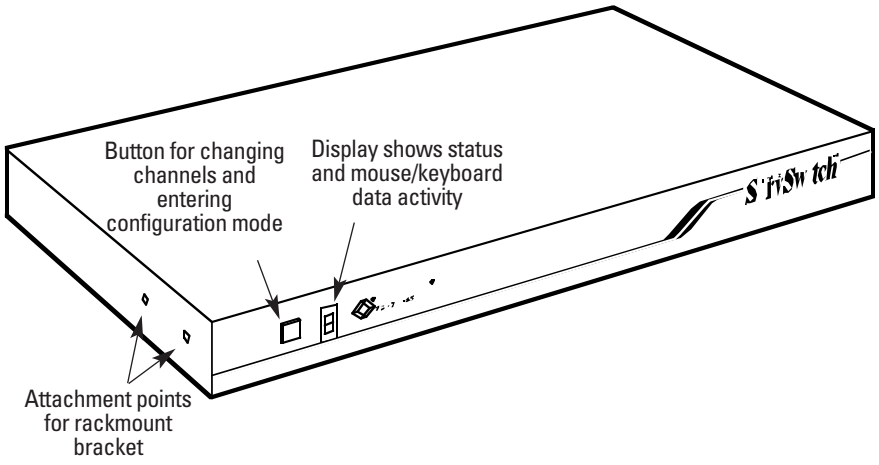
You will need cables to attach your computers to these switches. However, we do offer the regular Wizard models in Kits (SW641A-K and SW642A-K) that include all of the CPU-Extension Cables and keyboard and mouse adapters you might need to do this.

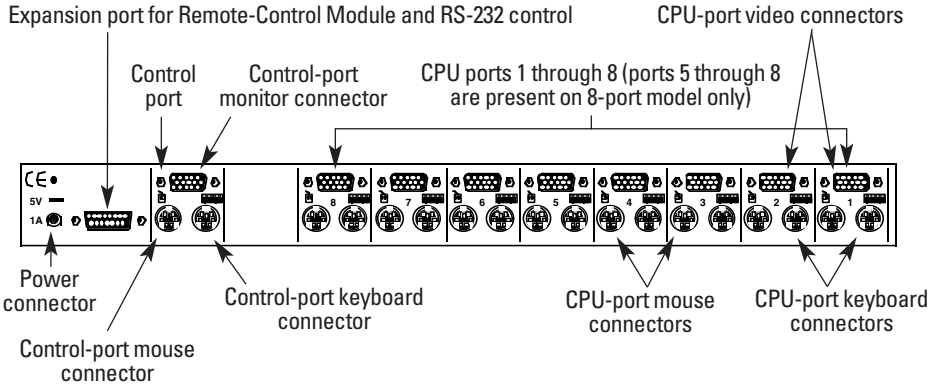
There's more—high video resolution, multiple channel-switching methods, auto-scanning, screen blanking, and keyboard commands (using any of several possible hotkeys), to name a few. To top it off, the ServSwitch Wizard Pro has a powerful on-screen menu system.

The ServSwitch Wizard (4-port model shown here) packs a ton of useful components into the least possible space.


Connector for optional power supply (5 VDC, 2.5 A)
Button for changing channels and entering maintenance mode
Connectors for PC video outputs
Channel-status LEDs
Keyboard and mouse connectors for PCs 1 and 2
Shared keyboard connection
Shared mouse connection
DIP switch for configuration
Power LED
Shared monitor connection
Keyboard and mouse connectors for PCs 3 and 4

The ServSwitch Wizard Pro does everything the smaller Wizard does, and also has a powerful on-screen menu system and a front-panel 7-segment display. It's even tough enough to put a monitor on top of.


Button for changing channels and entering configuration mode
Display shows status and mouse/keyboard data activity
Attachment points for rackmount bracket


Expansion port for Remote-Control Module and RS-232 control
CPU-port video connectors
Control port
Control-port monitor connector
CPU ports 1 through 8 (ports 5 through 8 are present on 8-port model only)
Power connector
Control-port mouse connector
Control-port keyboard connector
CPU-port mouse connectors
CPU-port keyboard connectors

Specifications

Standards — VGA, SVGA, XGA, or XGA-2 video

Interfaces —
Video: VGA;
Keyboard and mouse:
IBM PS/2 compatible; with appropriate adapters, also supports IBM PC/AT keyboard and RS-232 mouse;
Expansion port (Wizard Pro only):
Proprietary variant of EIA/TIA RS-232

Resolution — Up to 1600 x 1200 noninterlaced at up to 100 Hz

RS-232 Characteristics of Wizard Pro Expansion Port —
Protocol: Asynchronous;
Data Format: 8 data bits, no parity, 1 stop bit;
Data Rate: 1200 bps;
Flow Control: None

Maximum Distance —
Without optional power supply:
Both models: 2 m to any attached keyboard, monitor, and mouse;
Wizard: 10 m to any attached CPU or cascaded ServSwitch Wizard unit;
Wizard Pro: 3 m to any attached CPU or cascaded ServSwitch Wizard Pro unit;
With optional power supply:
Both models: 10 m to any attached keyboard, monitor, and mouse;
Wizard: 20 m to any attached CPU or cascaded ServSwitch Wizard unit;
Wizard Pro: 30 m to any attached CPU or cascaded ServSwitch Wizard unit;
Both models: 40 m to an attached ServSwitch Duo Extender across Premium Extender Cable

User Controls —
Keyboard commands;
Mouse-click functions;
(1) Top-mounted pushbutton;
Wizard Pro only: On-screen menu

Indicators —
Wizard: All top-mounted:
(1) Power LED;
SW641A: (2) Port (Channel) LEDs;
SW642A: (4) Port (Channel) LEDs;
Wizard Pro: (1) Front-mounted 7-segment status display

Connectors — All side-mounted (Wizard) or rear-mounted (Wizard Pro):
(1) HD15 female for monitor attachment;
(2) 6-pin mini-DIN female for keyboard and mouse attachment;
(1) Barrel jack for optional power-supply connection;
Wizard Pro only: (1) DB15 female for RS-232;
For each computer port, a set of (1) HD15 female (for video attachment) and (2) 6-pin mini-DIN female (for keyboard-port and mouse-port attachment):
SW641A: (2);
SW642A and SW644A: (4);
SW648A: (8)

Power — Either:
• 5 VDC at up to 500 mA from the keyboard interfaces of the attached computers, or
• From the optional power supply PS649 (not included):
Input: 100 to 240 VAC at 50 to 60 Hz from utility-power outlet, through detachable power cord and IEC 320 male inlet, to external transformer;
Output: 5 VDC at up to 2.5 A from transformer to Wizard (draws only 500 mA) or Wizard Pro (draws only 1 A);
Consumption: 2.5 watts (Wizard) or 5 watts (Wizard Pro) maximum

Maximum Altitude — 3048 m

Temperature Tolerance — 0 to 40°C

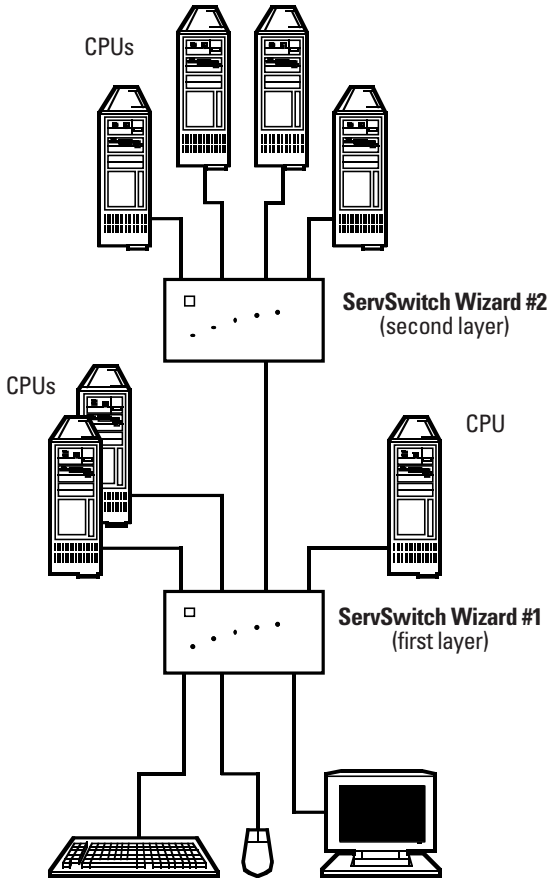
Humidity Tolerance — 5 to 60% noncondensing

Enclosure — Steel and aluminum

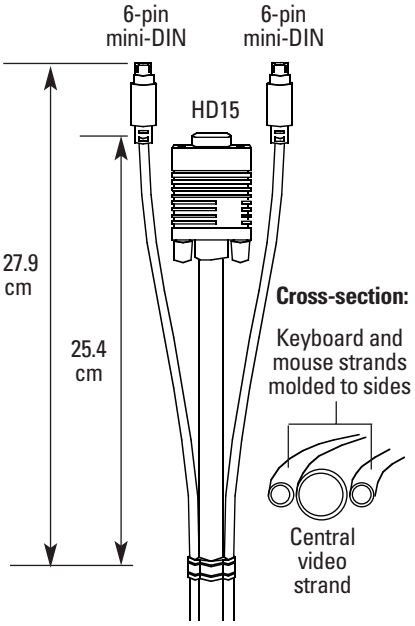
Size — Wizard: 2.8H x 16.8W x 22.1D cm (1.1"H x 6.6"W x 4.5"D);
Wizard Pro: 1.7" (1U) H x 17.1"W x 8.1"D (4.4 x 43.3 x 20.6 cm);
Connectors protrude an additional 0.4 cm from the rear of the unit, for a total depth of 21 cm

Weight — Wizard: 0.5 kg;
Wizard Pro: 1.4 kg

Control as many as four PCs with one Wizard or eight PCs with one Wizard Pro, or cascade units to control more, as shown below.



You can use Extension Cables to run most Wizard or Wizard Pro connections to greater distances.



The complete package (ServSwitch Wizard only):

- The ServSwitch Wizard itself.
- A users' manual.
- Two Velcro mounting strips.

The complete package (ServSwitch Wizard Kits):

- The ServSwitch Wizard itself.
- Two (SW641A-K) or four (SW642A-K) 3-m CPU-Extension Cables (EHN408-0010).
- Two (SW641A-K) or four (SW642A-K) PC/AT keyboard-port adapters (FA212).
- Two (SW641A-K) or four (SW642A-K) serial-mouse-port adapters (FA314).
- A users' manual.
- Two Velcro mounting strips.

The complete package (ServSwitch Wizard Pro):

- The ServSwitch Wizard Pro itself.
- A users' manual.
- Four stick-on self-adhesive rubber feet (for desktop applications).

Additional equipment you will need:

- Unless you purchase a Kit: Cables to connect the ServSwitch Wizard (unless you purchase a Kit) or ServSwitch Wizard Pro to the keyboard, video, and mouse ports of each of your PCs. (You can use our CPU-Extension Cable for this. You won't need to connect a mouse cable if you won't be using a mouse.)
- A monitor with a standard VGA type (HD15) connector that will work when connected to each of your PCs. The ServSwitch Wizard and Wizard Pro support low- and high-resolution monitors.
- A standard PC/AT or PS/2 keyboard.
- If your application requires a mouse, a PS/2 style two- or three-button Microsoft or Logitech™ compatible mouse or a Microsoft IntelliMouse compatible mouse. If you want to use the mouse to switch channels on the ServSwitch Wizard or Wizard Pro, you'll need a three-button mouse or an IntelliMouse type mouse.
- If your application requires a mouse, a suitable mouse driver for your PCs. This can be a PS/2 or RS-232 two-button driver or a Microsoft or Logitech driver.

Additional equipment you might need:

- The optional PS649 power supply (needed if the cable to any attached device is longer than 4.6 m). (We recommend you use an AC surge protector with this, as well as with your monitor and all your PCs. Call Black Box Tech Support to determine which surge protectors or uninterruptible power supply you'll need for your application.)
- *ServSwitch Wizard Pro only:* The KV6REM Remote Control Module for manual port switching at distances up to 3 m from the unit.
- *ServSwitch Wizard Pro only:* The Rackmount Kit for placing the unit in a 19" rack.
- FA212 keyboard adapters for computers with 5-pin DIN keyboard ports. (These adapters are included with the ServSwitch Wizard Kits.)
- If your keyboard has a 5-pin DIN connector, an FA211 keyboard adapter.
- FA314 mouse adapters for computers with DB9 RS-232 serial mouse ports. (These adapters are included with the ServSwitch Wizard Kits.)
- To extend your normal distance (this will require the power supply), you can run a User-Extension Cable to your user station, run CPU-Extension Cables to your CPUs, or use a ServSwitch Duo Extender with Premium Extender Cable for really long runs.

Ordering Information

ITEM	CODE
ServSwitch Wizard:	
2-Port	SW641A
4-Port	SW642A
ServSwitch Wizard Kit (see corresponding "Complete package" section on page 4 for contents):	
2-Port	SW641A-K
4-Port	SW642A-K
ServSwitch Wizard Pro:	
4-Port	SW644A
8-Port	SW648A
Power Supply for ServSwitch Wizard and Wizard Pro	PS649
Remote Control Module for ServSwitch Wizard Pro	KV6REM
Rackmount Kit for ServSwitch Wizard Pro	RMK19WP
Keyboard Adapter for a PC/AT Type Keyboard (6-pin mini-DIN female to 5-pin DIN male)	FA211
Keyboard Adapter for PC/AT Type Computers' Keyboard Ports (5-pin DIN female to 6-pin mini-DIN male)	FA212
Mouse Adapter for PC/AT Type Computers' RS-232 Serial Mouse Ports (6-pin mini-DIN female to DB9 female)	FA314
Premium KVM User-Extension Cable:	
3 m (10 ft.)	EHN409-0010
9.1 m (30 ft.)	EHN409-0030
Premium KVM CPU-Extension Cable:	
1.5 m(5 ft.)	EHN408-0005
3 m (10 ft.)	EHN408-0010
9.1 m (30 ft.)	EHN408-0030
15.2 m (50 ft.)	EHN408-0050
ServSwitch Duo Extender	KV6EXT
Premium Extender Cable, 39.6 m (130 ft.)	KV6100

BLACK BOX and the ◆ logo are registered trademarks, ServSwitch, ServSwitch Wizard, ServSwitch Wizard Pro, and ServSwitch Duo are trademarks, and "The World's Source for Cabling and Network Connectivity" is a service mark, of Black Box Corporation.
IBM, PC/AT, PS/2, and ThinkPad are registered trademarks of International Business Machines Corporation.
Logitech is a registered trademark of Logitech, Inc.
Microsoft is a registered trademark, and IntelliMouse is a trademark, of Microsoft Corporation.
Velcro is a registered trademark of Velcro USA Inc.